

WHAT IS CLAIMED IS:

1. A receiver comprising:

5 a receiving unit which receives a multiplex wave of a first broadcasting wave and a second broadcasting wave and outputs a received signal;

a first filter which extracts only the first broadcasting wave from the received signal and outputs a first broadcasting wave signal;

10 a second filter which extracts the first broadcasting wave and the second broadcasting wave from the received signal and outputs a second broadcasting wave signal;

a first AGC unit which controls a gain of the first broadcasting wave signal based on a level of the first broadcasting wave signal;

a second AGC unit which controls a gain of the second broadcasting wave signal based on a level of the second broadcasting wave signal;

20 an AGC adjusting quantity determining unit which analyzes a receiving condition of the first broadcasting wave signal and determines an AGC adjusting quantity based on an analyzed result; and

an AGC adjusting unit which adjusts an AGC quantity of the second AGC unit according to the AGC adjusting quantity.

25

2. The receiver according to claim 1, wherein the AGC adjusting quantity determining unit comprises:

a carrier detecting unit which detects carriers of the first broadcasting wave signal;

30 a threshold value analyzing unit which determines the receiving condition of the first broadcasting wave signal by comparing detected carriers with a predetermined threshold values; and

a unit which determines the AGC adjusting quantity based

on a determining result by the threshold value analyzing unit.

3. The receiver according to claim 1, wherein the threshold value analyzing unit comprises:

5       a unit which compares the detected carriers with the predetermined threshold value;

          a unit which compares a number of carriers having a level larger than the predetermined threshold value with a predetermined number; and

10       a unit which executes an adjustment by the AGC adjusting unit in a case that the number of carriers having the level larger than the predetermined threshold value is smaller than the predetermined number.

15       4. The receiver according to claim 2, wherein the receiving condition of the broadcasting wave signal comprises a condition associated with a range of the receiver from a broadcasting antenna for the first broadcasting wave signal and a condition of a fading.

20

5. The receiver according to claim 1, wherein the AGC adjusting quantity determining unit comprises:

          a carrier detecting unit which detects carriers of the first broadcasting wave signal;

25       a time-variation quantity analyzing unit which outputs a time-variation quantity indicating a level variation of the carrier during a predetermined time; and

          a unit which determines the AGC adjusting quantity in accordance with the time-variation quantity.

30

6. An AGC method comprising:

          a process of receiving a multiplex wave of a first broadcasting wave and a second broadcasting wave and outputting a received signal;

a process of extracting only the first broadcasting wave from the received signal and outputting a first broadcasting wave signal;

5 a process of extracting the first broadcasting wave and the second broadcasting wave from the received signal and outputting a second broadcasting wave signal;

a first AGC process of controlling a gain of the first broadcasting wave signal based on a level of the first broadcasting wave signal;

10 a second AGC process of controlling a gain of the second broadcasting wave signal based on a level of the second broadcasting wave signal;

an AGC adjusting quantity determining process of analyzing a receiving condition of the first broadcasting wave signal and determining an AGC adjusting quantity based on an analyzed result; and

15 an AGC adjusting process of adjusting an AGC quantity utilized in the second AGC process according to the AGC adjusting quantity.

20